

Appl. No. 10/646,649  
Reply to Office action of August 8, 2005

AMENDMENT

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claim Listing

1. (currently amended) A payload monitoring system for a vehicle having a chassis, comprising:
  - a first adjustable spring device;
  - a first pressure transducer that generates a first pressure signal based on a pressure of said first adjustable spring device; and
  - a first sensor configured to generate a position signal responsive to a relative height of the chassis with respect to a reference surface;
  - a first compressor configured to adjust said first adjustable spring device in response to an activation signal;
  - a display; and
  - a controller communicatively coupled to said first sensor, said first compressor, and said display, wherein said controller is configured to: that determines determine a payload of said vehicle based on said first pressure signal and said position signal; provide said activation signal to said compressor to said first compressor based on said payload and said position signal in order to substantially level said chassis; present said payload to an operator via said display; and present an overload warning to said operator via said display in the event that said payload is greater than a predetermined threshold.
2. (currently amended) The payload monitoring system of claim 1 wherein said first adjustable spring device is adjusted pneumatically.
3. (cancelled).
4. (currently amended) The payload monitoring system of claim 1 wherein said first adjustable spring device shock absorber is adjusted hydraulically.

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5. (cancelled).
6. (currently amended) The payload monitoring system of claim 1 further comprising:  
a second adjustable spring device; and  
a second pressure transducer that generates a second pressure signal based on a pressure of said second adjustable spring device, wherein said controller determines a payload of said vehicle based on said first and second pressure signals.
7. (currently amended) The payload monitoring system of claim 6 wherein said first and second adjustable spring devices are adjusted pneumatically.
8. (currently amended) The payload monitoring system of claim 7 further comprising:  
a second sensor generating a position signal; and  
a compressor that adjusts said first and second adjustable spring devices based on said position signal.
9. (currently amended) The payload monitoring system of claim 6 wherein said first and second adjustable spring devices are adjusted hydraulically.
10. (currently amended) The payload monitoring system of claim 9 further comprising:  
a second sensor generating a position signal; and  
a hydraulic pump that adjusts said first and second adjustable spring devices based on said position signal.
11. (cancelled).
12. (cancelled).

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13. (currently amended) A method of monitoring a payload of a vehicle, comprising:  
detecting a payload change within said vehicle, wherein said step of detecting includes  
detecting a change in vehicle position;

adjusting a spring device to compensate for said payload change, wherein said step of  
adjusting is based in part on said change in vehicle position;  
generating a pressure signal based on a pressure of said spring device; and  
calculating a payload value based on said pressure signal and said change in vehicle  
position;

informing an operator of said payload value  
comparing said payload value to a threshold value; and  
warning an operator if said payload value is greater than said threshold value

14. (cancelled).

15. (cancelled).

16. (original) The method of claim 13 wherein said step of detecting a payload change includes detecting a change in vehicle position.

17. (original) The method of claim 13 further comprising:  
initiating a delay period if a payload change is detected; and  
confirming said payload change upon expiration of said delay period.

18. (original) The method of claim 13 wherein said step of adjusting a spring device includes adjusting hydraulic pressure supplied to said spring device.

19. (original) The method of claim 13 wherein said step of adjusting a spring device includes adjusting pneumatic pressure supplied to said spring device.

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20. The method of claim 13 wherein a pressure sensor generates said pressure signal.
21. (cancelled).
22. (original) The method of claim 13 further comprising:  
generating a position signal of said vehicle; and  
refining said payload value based on said position signal.
23. (cancelled).
24. (cancelled).
25. (cancelled).
26. (cancelled).
27. (cancelled).
28. (cancelled).
29. (cancelled).
30. (cancelled).